Corporate Profits and National Output

Profits Decline Relative to Output in Postwar Period Depreciation Allowances Show Sharp Rise

Quarterly Estimates of Corporate Gross Product Depict Postwar Changes

CORPORATE profits before taxes were at an annual rate of \$50½ billion in the first six months of 1962, well above the total for the preceding year though off slightly from the \$51 billion flow recorded in the final quarter of 1961. When the profits estimates for the current period are adjusted to reflect the Treasury Department's 1962 liberalization of depreciation allowances, it is expected that the first half figures will be lowered substantially.

This article reviews the trend in corporate profits over the postwar period; discusses the effect on corporate profits and national income of the most recent change in regulations governing depreciation allowances; assays the impact of other changes of a similar nature that have occurred during the postwar period; and presents a quarterly measure of corporate gross product to provide a series for use in analyzing changes in corporate output and earnings.

Earnings of corporations are measwed net of charges for depreciation of plant and equipment. Depreciation measures the wear and tear and obsolescence of fixed capital and is based on accounting practices used for tax purposes. Since World War II, laws and regulations governing the computation of depreciation write-offs have been changed several times as a result of the accumulation of experience regarding the life of capital assets, and as opinions changed as to the proper timing of depreciation allowances. Each such change in procedure has introduced a new element into the measurement of corporate profits for national income purposes.

Hitherto, the generally moderate increases in depreciation stemming from tax changes have been obscured by the long-term uptrend in depreciation allowances associated with a steadily expanding stock of capital and the replacement of prewar equipment by new and more costly items. This was because earlier changes in the rules of depreciation applied only to capital purchased after the liberalization of procedures, and the effects therefore showed up gradually.

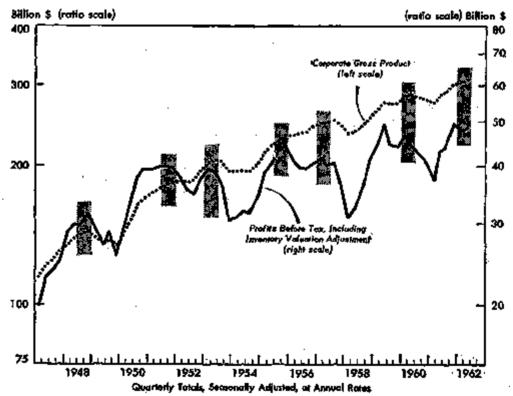
New depreciation rules

Treasury provisions designed to permit more realistic depreciation, and which became effective in mid-1962, are applicable to all existing capital.

They may result in an increase of as much as \$2 billion to \$3 billion in depreciation in 1962, with a corresponding decline in corporate profits on this account. This latest change in procedures, together with the accelerated amortization authorized in World War II and again in the Korean crisis, and the larger depreciation allowances stemming from the Internal Revenue Act of 1954, will yield a corporate profits total in 1962 about \$6-7 billion lower than would have been the case had these legal changes not occurred. These developments have made the evalua-

POSTWAR MOVEMENTS OF TOTAL CORPORATE OUTPUT AND CORPORATE EARNINGS

Trends Have Diverged in the Postwar Period With Profits Showing Lesser Rise and High Cyclical Sensitivity



Note: Shoded areas represent cyclical peaks abosen for enalysts.

U.S. Desertment of Commerce, Office of Business Economics.

Table 1.—Charges to Account of Corporate Business, 1947-62 ¹

[Billions of dellare]

			-										· ·			
		1947	1948	1940 .	1960	1951	1952	19,53	1954	1955	1956	1957	1958	1950	1963	1001
Tutal charges to sochorate account		367.6	411.1	389.3	483.8	\$21. e	628.9	893.7	545.0	638.8	674.9	718.1	697, 6	750, 1	811, 2	832.1
Intermediate purchases. Corporate gross product.		244. 5 123. 0	270.4 140.7	251.9 137.8	303.3 156.5	341_4 180.3	340.2 188.6	851 2 902.4	349.1 197.6	415.2 223.1	437, 6 237, 3	404.3 348.8	656.0 263.5	518.2 271.1	528.4 222.6	545. g 287. j
Indirect taxes Capital ecosumption allowances Income originating in corporate business		12.0 5.3 104.7	12.6 7.7 120.4	13.3 8.6 115.5	14.8 9.4 139.3	16.9 11.0 153.2	17.8 12.5 168.6	19. 3 14. 1 160. 0	18.7 28.9 188.3	20.8 15.4 184:2	22.1 26.6 195.2	24.0 21.8 202.9	25.1 23.7 105.8	27.0 34.3 220.8	29, 8 25, 9 237, 4	30,5 27,5 236,⊕
Compensation of employees		81.2 77.3 3.9	90.0 80.0 4.1	\$7.7 \$3.4	97.4 92.7 8.7	113.9 106.3 7.1	131.6 14.1 7.5	123, 4 124, 2 8, 2	130.4 121.9 8.5	143,2 132,5 8,7	164.6 143.3 10.9	162.7 150.6 12.3	359. 6 147. 4 32. 1	174.5 160.6 14.1	183.1 167.5 15.8	185, g 160, 7 10, 4
Not interest Profits before tax, including inventors tion adjustment	value-	22.0	30.0	27.1	2 34.7	. a 89. 7	.8 \$5.5	36.2	.5 82.8	5L6	40.2	39.7	1.0 86.4	45.4	43.7	43,1
<i></i>		(Billions of dellars secondally adjusted at annual re						tes]			<u> </u>	,-				
•	1967				19	48		· · · · · ·		49		ī	19	60		
	1	п	т	TV	τ	T.	TIT	τv	I .	, II	ш	īv	1	п	щ	iv
Tutal charges in corporate necottal.	345,4	399.6	384.0	\$95.6	414.5	447.7	428.3	418.1	389. 5	388.4	389.7	\$80.5	44.6	437.8	484.0	502
Intermediate purchases	220.4 116.0	220.2 121.3	244_1 124_6	263.2 130.1	264.0 130.2	268.0 120.7	275.9 142.3	271.6 344.5	259. 9 139. 9	261.4 137.0	260. 5 139. 2	246. 0 134. 8	265.9 140.8	268, 7 161, 1	220.0 104.0	982.9 170.0
Indirect three Capital consumption allowances Income originating in corporate business,	11.9 5.8 98.3	11.8 6.3 103.3	11.0 8.5 106.3	12.4 · 6.8 110.9 ·	19.3 7.2 116.7	12.6 7.6 119.5	121.8 121.8	12.7 8.1 123.5	12.9 8.2 112.6	13.2 8.4 115.8	12.7 8.6 115.9	13.5 8.6 112.1	13.7 9.0 118.1	14.4 9.3 127.3	15.9 9.5 138.6	0.61 6.6 1. 21 1
Compensation of employees	3 .7	79.6 75.7 3.8	81.8 · 77.8 ·	#3.1 ° 80.9 4.1 °	87.8 83.4 4.1	89.2 84.1 4.1	91.7 87.6 4.3	11.8 27.6 4.2	89.7 83.5 4.2	88.2 83.9 4.3	84.4 4.4	85. 2 81. 7 4. 5	89.4 84.3 6.1	94.5 89.0 6.4	100.4 94.6 8.9	305,3 90,1 6.2
Not interest. Profits before that, including invan- tory valuation adjustment	19.5	23.1	23.8	.7 25.2	.4 28.8	90.0	29.7	31.5	.8 28.5	26.7	28.7	25.4	.2 28.5	39.6	.2 28.0	.2 319.5
	1951 1932			1988				1964								
Total charges to corporate account	530,0	625.5	514.5	518. 2	518.0	884.1	526.8	585.6	556.7	562.1	581, 5	234,3	535,5	538,7	161,2	565,1
Intermediate purchases	858.7 170.8	348.8 179.7	328.9 181.1	332. 6 163. 7	833.0 385.7	229.1 185.0	340, 3 188, 8	358.3 197.3	352.6 203.1	355.7 205.4	887. 1 204. 4	339. 6 196. 7	339.4 190. I	342.1 196.8	368.2 196.0	382.€ 202.€
Indirect taxes	16.2 10.3 149.8	15.4 10.7 181.6	15.7 11.2 154.2	14.4 11.4 155.7	18.0 11.8 157.1	17. 7 12. 2 155. 1	17.9 12.4 155.2	18.7 18.0 105.7	19. 1 13. 5 170. 5	19.4 18.9 172.2	19.6 14.3 170.5	19.4 14.7 162.7	18.8 16.1 162.2	18.7 16.6 162.3	18.8 16.1 161.6	18.8 16.7 167.0
Compensation of emuloyees	110.2 108.4 6.5	118.3 105.3 7.0	113.9 106.6 (7.1	115.7 108.4 7.3	118.8 111.6 7.4	119.2 111.8 7.4	121.0 113.4 7.5	197. 5 119. 7 7. 8	130.8 122.5 8.0	133. 2 126. (8. ?	138.7 125.4 8.8	131.0 123.7 8.3	130.5 122.0 8.5	127.6 127.4 8.4	129, 6 120, 9 8, 5	112 0 123 8 8.7
Net injerest Profilst before tax, including inven- tory valuation adjustment	. 8	39.9	40.0	.3 39.7	38.0	.8 85.5	.5 84.9	37.8	.3 39.2	,3 38.6	.4 36.5	70.8	31.2	.5 82.0	31.7	.6 34-4
	 	1\$	5 5	·	1960			1967				1958				
Tetal charges to corporate account	60L6	637, 3	452,9	861,7	642.6	648.1	968.7	700.8	712,1	T10,4	733.4	796, 2	669.2	674.5	7N.5	741.7
Intermediate purchases	389. 4 212. 0	417.1 220.2	425.7 227.2	428.8 282.9	\$29.7 332.9	432.2 235.7	431. 8 387. 4	457.0 243.5	159.7 248.8	461.2 249.4	471,8 251.6	480.4 245.6	433, 2 236, 0	436.9 237.6	139.8 245.0	495.3 256.4
Indirect taxes. Capital consumption allowances. Income originating in corporate business.	19.6 17.4 170.1	20.6 18.0 181.7	20.9 18.7 197.6	21,3 19.3 192.5	21. 4 19. 0 191. 9	21.8 19.9 194.6	22. 2 20. 2 195. 0	23.2 29.4 199.8	22.6 21.3 205.5	28.8 21.7 203.8	24.3 22.2 205.2	24.3 22.3 199.3	24.3 22.4 189.3	24.5 22.5 190.3	25, 2 22, 7 197, 1	26.9 23.1 206.4
Compensation of employees	138.6 128.7 8.1	140.7 131.2 9.5	141.8 134.3 10.0	147.0 187.7 10.2	180.6 140.1 10.5	154.0 143.3 10.7	155.0 154.0 /1.0	169.0 147.7 11.3	16L 1 149. 5 11. 9	163. L 151. 0 12. L	164.3 152.0 12.3	162.2 149.8 12.3	157.6 148.6 12.0	156.5 146.8 11.0	160.0 148.0 12.1	188.3 131.1 12.4
Net interest Profits before tax, including invon- tory valuation ofjuntment	33.8	40.5	. 5 43.0	.6 #L1	3 41.0	, 2 34. %	.a 29.7	.3 #0.5	11.7	40.2	40.4	36.6	#0.8	1.0 #2.0	12.1 1.0 38.1).0 41.7
		1959		1900			1961			1902						
Total charges to corporate account,	704.0	811. .1	782.0	794, 4	. 818.8	819.8	907. L	799,1	796,0	625, 2	862.5	840.6	878,4	692,2		··-
Intermediate porchoses	490, 6 204, 5	534. 8 270. 8	519.0 272.0	510.8 274.4	534.0 284.8	534. 5 285. 2	524. B 264. 3	520, Z 278, 9	521. 0 373. 0	430.0 286.3	551.3 200.2	500. 6 300. 0	575.7 802.7	58\$. 0 20\$. 7		
Indirect laxes. Capital consumption allowances. Income originating in corporate business.	20. 4 23. 4 214. 7	20.6 24.1 225.8	37.4 24.5 220.8	97.8 25.0 221.8	24. 5 24. 5 250. 1	29.9 24.0 229.3	28), 5 28, 9 227-2	20.6 26.2 223.2	23, 2 24, 6 219, 2	30.3 27.3 238.7	30. 4 27. 8 232. 1	31.4 28.6 240.2	31.6 28.7 242.3	32.5 29.1 247.1		
Compensation of employees. Vages and saluries Supplements	109. 5 156. 9 18. 7	170, 1 161, 0 14, 2	175.6 101.2 14.3	170.8 102.4 14.4	182.8 167.3 15.5 .0	184. 4 108. 6 15. 6	183.8 168.2 16.8	131.3 165.8 - 15.5 - 6	180. 5 164. 9 15. 7	164.8 168.0 16.9	187. 2 171. 1 10. 1	190. 5 174. 1 10. 4 1, 0	183.5 176.0 17.5 1.0	107.8 170.0 17.9		
Not interest Profits before tax, including inven- tary valuation adjustment (44.4	48.9	41.8	44.0	46.7	44.8	42.7	+1.2	37.6	48.0	41.9	4R,7	47.8	48.3		

¹ Total charges to corporate account (sales plus inventory change) and intermediate purchases are unconsolidated totals, because intercorporate sales and purchases are included.

Corporate greet product is a consolidated aggregate.

2 Excitates profits originating in the rest of the world.

tion of movements in corporate profits most difficult because of the entanglement of economic and legal aspects.

Here, it may be noted that the extent of the current increase in depreciation, and the reduction in profits resulting therefrom, is quite speculative because of the lack of comprehensive reports since the effective date of the new regulations. Indeed, some companies have probably not yet made a final decision regarding use of the new depreciation guidelines. The \$2-3 billion range used is based on an assessment of corporate potentials rather than on reported data or tax records.

Depreciation and profits

A brief resume of changes in the laws relating to depreciation will give perspective to the more recent development. Business expenditures for plants, machinery, and equipment cannot, as a general rule, be written off fully as an expense of any one year's operations. Instead, each year's business is charged with a portion of the capital expense until the entire cost, less salvage value, has been deducted.

Total depreciation chargeable against a capital asset is fixed, but modifications in law or by administrative action may have an important effect on the timing of deductions. The pronounced liberalizations of depreciation introduced in 1954 and again in 1962 will effect an indefinite postponement of some taxes as long as capital outlays increase.

Prior to 1934, taxpayers generally fixed their own periods for writing off capital assets, unless the (then) Bureau of Internal Revenue showed their choices to be unreasonable. From 1934 on, the burden of proof as to the correctness of a deduction was on the taxpayer, and in 1942, the Bureau issued Bulletin F which specified for many types of machinery and equipment the length of life to be used in calculating depreciation. Individual companies were permitted to use variations determined from experience factors.

Temporary departures from this general policy occurred when accelerated amortization of defense facilities was authorized in 1940 and again in 1950. Such facilities could be written off in

5 years on a straight line basis, regardless of their customary length of useful life. This rapid writeoff was available for only that part of the cost which was certified as necessary to national defense. Many capital assets qualifying for this accelerated amortization have since been completely depreciated and the impact of these programs on reported depreciation is negative at the present time. That is, although depreciation on many defense facilities is now zero, the facilities continue to contribute to production, and total depreciation charges on this account are less than they would otherwise be.

Until 1954, depreciation was generally calculated on a straight line basis. That is, the annual depreciation allowance on a capital item was computed by dividing the cost of the item by the number of years of its useful life, with the annual dollar depreciation the same in all years.

Changes in 1954 and 1962

The Internal Revenue Code of 1954 authorized the use of 2 alternative methods of calculating depreciation. The double declining balance method permits a high annual rate of depreciation to be used—currently, the rate is double that employed in straight line depreciation—but this rate is applied to only the undepreciated portion each year.

The second method is known as the sum-of-the-years-digits. Under this method, annual depreciation is calculated by applying to the asset's cost a fraction which is reduced each year. The fraction is determined as the ratio of the number of years of useful life remaining in the asset to the sum of the digits in the original total useful life. For an asset with a 5-year life, the depominator would be 5+4+3+2+1=15. In the first half of an asset's life the straight-line method writes off onehalf of its cost; the double declining balance method writes off approximately two-thirds; while the sum-ofthe-years-digits method writes off about three-fourths.

The new depreciation procedure, effective for income tax returns filed on or after July 12, 1962, permits substantial reductions in the length of depre-

ciable lives of machinery and equipment used by industry and allows greater flexibility in the rate at which equipment may be written off. As noted, the full-year effect of the use of the new procedures, at 1962 levels, may amount to a \$2 billion to \$3 billion increase in corporate depreciation deductions claimed by industry. The counterpart of these higher depreciation charges will be a reduction in taxes of about half as much.

Comprehensive data reflecting these changes will not become available until tax returns filed subsequent to mid-1962 have been tabulated by the Internal Revenue Service—probably in early 1964

Problem of Current Profits Measure

Since national income is measured on an accrual basis and the quarterly profits estimates are tied to annual corporation tax returns filed with the Internal Revenue Service, the quarterly profits and national income estimates will reflect retroactively as far back as the third quarter of 1961 the higher levels of depreciation and lower profits. However, no empirical estimates of the extra depreciation to be claimed are as yet available. Moreover, company reports for the first and second quarters of this year did not, of course, reflect the new depreciation rates which were not authorized until July, nor do the national accounts.

Some corporations may introduce the adjustment into their third quarter reports; others will include it in their annual report; some will probably not adopt the new procedures. Practice, doubtless, will vary widely in this respect. In any event, there will be considerable uncertainty in the quarterto-quarter estimates of corporate profits for some time to come—until the new procedures have been in effect long enough for the movement in corporate profits to be established on a comparable basis, and until data have become available by which current tendencies can be measured under the new rules.

Meanwhile, the Office of Business Economics will prepare estimates of corporate earnings before depreciation allowances. From these will be deducted estimates of depreciation which will represent an extension of the presently published depreciation series before the 1962 liberalization. When the data necessary to measure depreciation, as defined in the 1962 tax laws, have been assembled, we shall use such data to construct a new series which will reflect the impact of changes in Treasury regulations.

A series measuring the true economic depreciation of the Nation's capital stock would be desirable so that the national income aggregate would not be influenced directly by changes in the laws and regulations governing depreciation. But the development of such a series, controversial in concept and difficult of execution, remains in the future. Accordingly, it seems appropriate to introduce a broader measure of economic output that, though it does not "solve" the problem, is independent of changes in depreciation. This measure is corporate gross product, which is the corporate segment of the gross national account.

Corporate gross product is a useful

tool for analyzing corporate operations. It furnishes a means for evaluating the place of depreciation and indirect business taxes, as well as the various factor costs, in the corporate cost structure, and for relating them to profits. It is more comprehensive than is income originating, and provides a broader base against which changes in costs and in profits, either gross or net of depreciation, can be meaningfully compared.

Measure of corporate gross product

Corporate gross product consists of the contribution of corporations to the market value of the output of goods and services produced by the domestic economy. It is computed as the sum of compensation of corporate employees, net interest paid by corporations, corporate earnings before taxes (these components make up income originating in corporations), indirect business taxes, capital consumption allowances, and business transfer payments less subsidies paid corporations government

Table 2.—Charges to Account of Corporate Business, Selected Periods
[Billions of dollars exasonally adjusted at animal rates]

	Second	Second	First	Gecourt	Phst	First	First
	half	half	half	hair	half	half	half
	1948	1961	1960	1955	1987	1950	1902
Total charges to corporate account	418.2	51E.5	\$\$8.4	657.3	TL4	819.4	695. 4
Intermediate purchases. Corporate gross product	274.8	333, 1	884.1	427, 2	462, 5	534.3	679.7
	143.4	182, 4	904.3	201 1	2 6 8, 9	285.0	305.7
Indirect toxes Capital consumption allowances. Income originating in corporate business.	[2.7	18.0	19. 2	21.0	23.7	29.6	31.0
	8.0	11.4	13. 7	19.0	21.5	26.7	29.9
	132.7	186.0	171: 3	190.0	203.7	229.7	24.7
Competestion of employees. Vages and salaries Supplements. Nat laterast	91.0 27.0 4.2	114.8 107.8 7.2 3	132.0 123.0 8.1	146.1 136.0 10.1 .5	103.2 150.3 12.0	183.6 168.0 15.6	198.6 178.0 17.7 1.0
Net interest Profits before tax, including inventory valuation adjustment 1	30. B	89.8	39.0	49.5	42.0	48.5	48. L

^{1.} Excludes profits originating in the rest of the world.

Table 3.—Charges to Corporate Gross Product, Selected Periods

(Percent distribution)										
	Second half 1945	Second half 1951	First balf 8581	Seeand haif 1965	First half 1957	First half 1960	First half 1962			
Corporate green product Indirect tarret. Outplied construction ellowarous. Instruction of contraction in companies bittelnates.	100.4 8.5 8.5 88.6	101,4 8.8 8.2 85.0	100. 0 0, 4 6. 7 43. 0	100, 6 9, 1 8, 2 82, 6	190. ¢ 9. \$ 8. 6 81. 9	10.4 10.4 80.6	104. 6 10. 6 9. 6 80. 1			
Componentian of employees. Componentian of employees. Wages and talaxies. Supplements. Net interest. Profits before tax, including inventory vehication adhesiment.	#LD	83.0 83.0 4.0 .2	83.0 64.5 60.7 2.0 .2	83.5 59.1 1.0	81.8 86.9 80.4 4.8 7.2	80.6 84.4 88.4 8.5 8.5 18.0	80. i 64. e 58. 2 5. 6 . 3			

^{1.} Excludes profits originating in the rest of the world.

The profits component of national income and of corporate gross product, shown in line 11, table 1, is measured before deduction of income taxes or depletion. It is adjusted to take out gains and losses arising from changes in replacement costs of inventories as well as other capital gains and losses, since these result from price phenomena rather than from production.

The profits totals used exclude profits received by U.S. corporations from their foreign branches and from their investments abroad. This last exclusion amounts to approximately \$2\% billion currently.

Accordingly, the profits total for the first half of 1962 discussed in the following sections and shown in the accompanying tables amounts to \$48.1 billion, instead of the \$50% billion aggregate noted in the opening paragraphs. The larger figure, which includes corporate profits originating outside the United States, is a component of total gross national product, whereas the \$48.1 billion figure relates to corporate gross product originating within the domestic economy.

Those familiar with the usual comparisions of corporate profits as a percentage of national output will note that profits are a substantially smaller proportion of corporate gross product than of corporate national income. This difference reflects the inclusion of capital consumption allowances and indirect business taxes in the product measure and their exclusion from the income aggregate. Compensation of employees and net interest, the other income shares, are affected in the same manner as are corporate profits by the substitution of gross product for national income as the denominator.

Table 1 presents the cost structure or framework of corporate business for the period 1947 through the first half of 1982. Its composition will be discussed as the various components are considered.

Analysis confined to cyclical peaks

The well-known tendency of corporate profits to fluctuate sharply with

Amuel estimates of corporate gross product were first presented in a review of overgreate grofts in the early postwar years in the January 1995 issue of the Sarsay of Carrent Buriness. The present report presents a comparable series on a quarterly basis.

changes in the level of business activity may be seen in the chart on page 19. In this review, attention centers on the longterm, basic changes in the share of production that accrues to capital in the form of corporate earnings—rather than on changes that reflect simply the course of the business cycle. These latter are best eliminated by measuring profits over time at comparable stages of the cycle. For this, we have chosen the high points of the several cycles which are shown as shaded areas in the chart.

Because short-run changes in the corporate profits share are so pronounced that small differences in timing with respect to cyclical position may influence the observed secular trend, time spans 6 months long—broad enough to mask random changes—have been selected to represent each cyclical peak. For brevity, the individual periods will hereafter be referred to by the year in which they fall, i.e., 1948, 1951, 1953, 1955, 1957, 1960, and 1962. The values for each time period have been converted to annual rates by multiplying all figures by 2.2

The choice of these periods is not intended to suggest that corporate business was operating at the same level of capacity in each. Indeed, there is evidence that compared to the early postwar period, there has been considerable excess capacity at recent cyclical peaks as complete recovery was not achieved. The effect of this excess capacity, or lack of demand, on the profits share is considered later in the discussion.

Corporate Profits Decline Relative to Output

The relation of corporate profits and total corporate output (corporate gross product) at selected periods of high economic activity are shown in table 2. Earnings before taxes rose from \$30% billion in 1948 to an annual rate of \$48 billion in early 1962. This increase of almost three-fifths in profits went along with a more than doubling of corporate gross product. Accordingly, the share

of total corporate output returned to capital in the form of profits declined by one-fourth over the postwar years. With tax liabilities doubling over this span, after tax profits rose about one-fourth, and the share of corporate output accruing to capital after payment of income taxes dropped two-fifths.

The course of the decline in the profits share of output has been irregular. From 1948 to 1951, there was a temporary rise in earnings relative to total output. From 1951 to 1957, the profits share of total corporate output declined sharply. Since 1957, this share has remained roughly constant, though well below earlier highs.

Types of change in profit ratios

Changes in the overall profit ratio may originate in shifts in the distribution of factor income within individual industries, or, they may reflect changes in the industrial composition of income. That is, the shares of income going to labor and capital may change in one or more industries thereby causing a change in the all-industry profit-ratio. Or, there may be a shift in the industrial composition of output from high (low) profit industries to low (high) profit industries. Such a change in industry mix could affect the overall profits ratio even though profit margins within individual industries remained constant.

The impact of each type of change on the profits was measured by first holding the industry-mix constant and allowing profit ratios to vary in accordance with actual developments. Next. profit ratios were held constant for each industry and applied to actual sales—because corporate gross product is not available by industry, it was necessary to use sales to test the effect of changes in profit margins. In each instance, the computations were made in considerable industrial detail. The profits aggregate resulting from each of these standardizations was then compared with actual profits. As a check, the same standardization procedure was applied to profits and income originating by industry. The two procedures yielded similar results.

The results reveal that changes in product-mix had comparatively little effect on movements in the overall profit ratio in most periods. From 1948 to 1953, and again from 1957 to 1962, changes in industrial composition tended to raise the ratio of profits to corporate gross product by a very small amount. From 1953 to 1957, industry shifts tended to reduce overall profit margins somewhat.

Change in profit margins large

Over the course of the decade and a half, declines in profit ratios among individual industries were widespread. From 1948 to 1951, changes in industry margins had a bolstering effect on the overall profit ratio. This, together with the fact that the largest increases in sales during this period occurred in relatively "high-profit" industries, explains the small increase in the total profits share between 1948 and 1951.

From 1951 to 1957, however, profit ratios were off in almost every industry, and in most, the decline was substantial. Practically all of the contraction in profits as a percent of corporate gross product was caused by declines in profit ratios for individual industries.

A further decline in industry profit margins from 1957 to 1962 was partly offset by the more favorable industrymix, and the overall profit ratio held up rather well.

Industrial shifts in profit ratios

From 1948 to date, the ratio of profits before taxes to total income originating in corporations (income originating is used in the absence of corporate gross product by industries) declined one-fifth. The decline differed widely among industries. In construction, trade, and the services, profit ratios declined substantially, as the sellers' market of the immediate postwar years rapidly siphoned off pent up consumer demand.

The return of a more normal competitive situation in the world market for raw materials forced a sharp cut in mining profit margins. A steep decline in profit margins occurred in the transportation field, where the dominant railroad industry lost ground to other carriers in which the corporate form of organization is less prevalent. In both of these industrial groups, as well as in trade and service industries, profits in

The profits peak in mid-is09 is omitted because it reflects the special situation surrounding the major steel strike of that time. It does not represent a cyclical peak.

1962, measured as a percent of total income originating, were about half the 1948 rate.

On the other hand, in communications and public utilities regulated rates, which were independent of market forces, had been held down so that producers had not benefited from the immediate postwar situation. Profit margins in these groups gradually advanced—rising by more than 50 percent from 1948 to 1962.

Earnings ratios held up well in the finance industry as interest rates moved up substantially over the postwar period. Manufacturing industries, accounting for about half of all income originating in corporations, showed declines approximating the all-industry figure of one-fifth, with no significant relative difference between the durable and nondurable goods sectors in this respect.

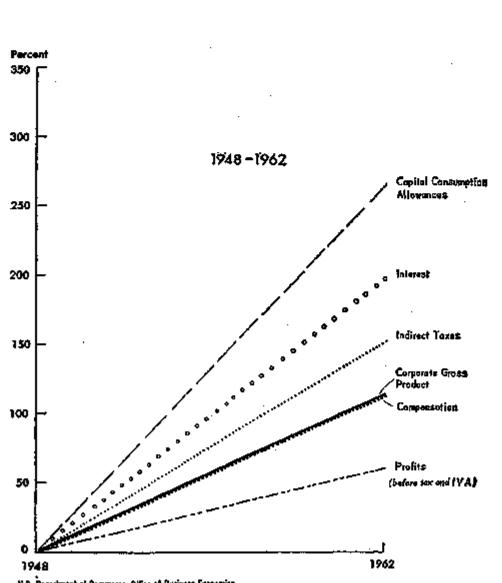
Source of Change in Profit Margins

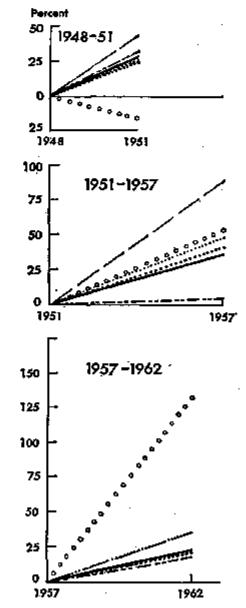
Attention is turned now to an examination of factors underlying changes in the corporate profit margins. The percentage distributions in table 3, computed from the figures in table 2, show relative changes in the cost structure of all corporations taken together.

Before examining the relative shifts in profits and the various charges against gross product, a related development may be noted. This is the striking stability in the apportionment of total charges to corporate account between corporate gross product (onethird) and intermediate purchases from

OVER THE POSTWAR PERIOD-

COMPENSATION OF EMPLOYEES HAS KEPT PACE WITH THE RISE IN PRODUCT; PROFITS HAVE LAGGED; DEPRECIATION AND INDIRECT TAXES HAVE RISEN FASTER THAN CORPORATE OUTPUT





G.S. Department of Commerce, Office of Business Economics

other businesses, corporate and noncorporate, of goods and services used in the productive process (two-thirds). This latter measure (line 2, table 2) is derived by subtracting corporate gross product (line 3) from corporate revenue (line 1).

Corporate gross product represents a consolidated account for all corporations and there is no duplication involved in the items in lines 4 through 11. Corporate revenue and intermediate purchases, on the other hand, contain considerable duplication as they both include sales and purchases made businesses in successive stages of the production process.³

Table 4.—Charges to Account of Corporate
Business

(Percent change selected periods)										
	1948- 1951- 51 57		1057- 62	1948- 62						
Total charges to corporate ac- count. Intermediate purchases Corporate grees product. Indirect taxes	23. 3 21. 2 27. 2 28. 0	38.0 38.8 38.4 48.0	24.5 25.3 22.8 35.8	111.7 111.0 113.9 151.6						
Capital consumption allow- ances. Income originating in cor- porate business.	43.1 26.3	88.7 81.4	34.7 20.2	203.6 \$9,4						
Companietion of employ- uss Weget and sularies Supplements Not interest Profits before tax in-	26. 2 22. 9 72. 5 —18. 5	41,3 30.6 66.0 53.6	20. 0 18. 4 47. 0 (32. 1	113.2 108.2 \$22.6 197.6						
etion adjustment ;	30. 2	2.8	17. 2	57.0						

1. Broudes profits originating in the rest of the world.

Changes in corporate costs

In considering factors in the relative decline in corporate profits, attention is directed to the left panel of the chart on page 24 and to the percentage distributions of charges against corporate gross product in table 3. These show clearly the lag in profits over the postwar period. Corporate gross product more than doubled from 1948 to the first half of 1962, while profits rose three-fifths. Accordingly, earnings fell from 21 percent of gross corporate output in 1948, to a little less than 16 percent in 1962.

The smaller panels in the chart depict the timing of the relative decline in profits. From 1948 to 1951, corporate earnings rose almost one-third, compared to a gain of a little more than one-fourth in product. Over this span, profits as a residual share benefited from the fuller utilization of resources resulting from military and civilian demands that accompanied the outbreak of hostilities in Korea, and in 1950-51, they reached a postwar high as a proportion of total output.

Profits share of output decreases

From 1951 to 1957, corporate profits rose 3 percent, while corporate gross product advanced more than one-third. As a consequence, the share of total output accruing to capital in the form of earnings fell one-fourth. Over the next five years, the increase in corporate earnings (17 percent) was not much less than the overall growth in output (23 percent), and the share of profits was down only 5 percent. The relative decline in profits that has characterized the postwar period as a whole is thus seen to be a product of the 1951 to 1957 period.

Employee compensation stable

In order to identify the factors related to the profits decline, the various charges that must be met are now considered. By far the largest of these is compensation of employees.

Wages and salaries plus supplementary labor income ("fringe benefits") account for just under two-thirds of the total cost of the national outputa fraction that has remained quite constant. Over the postwar period, expansion in employee compensation paralleled that in total output. From 1948 to 1962, compensation increased 113 percent, a rate of gain identical with that in corporate gross product. In the first and last of the three periods considered. the payroll component lagged slightly behind other costs. From 1951 to 1957, when the profits "squeeze" developed, the corporate wage bill expanded a little more than did total output. Over the entire period, gains and losses offset, leaving the share of employee compensation in 1962 the same as in 1948.

Net interest a minor cost

The third item of factor income, not interest paid by corporations, has expanded from \$1/3 billion in the early postwar years to \$1 billion currently.

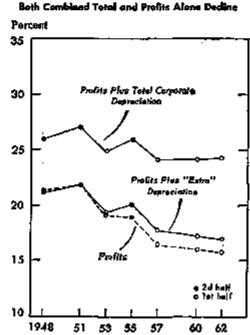
In relative terms this expansion is exceeded only by that in capital consumption allowances and supplementary labor income. Over this period, however, the dollar volume of net interest originating in corporations has been so small that despite its rapid growth, its share of corporate output has increased from only 0.2 percent to 0.3 percent.

Indirect business taxes rise

After employee compensation and profits, indirect business taxes, essentially taxes on sales and property, account for the largest portion of corporate gross product. From \$12% billion in 1948, they rose to a current rate of \$32 billion—an increase of one-fifth in importance in the corporate gross product cost-price structure.

Most of the rise in indirect taxes is associated with the growth of the economy. With sales in 1962 more than double those in 1948, the yield from excise taxes has risen substantially simply because of the increased volume of business. As a further reflection of the growth of the economy, there has been a great increase in plant and equipment expenditures since World War II.

DEPRECIATION AND PROFITS AS A PERCENT OF CORPORATE GROSS PRODUCT AT CYCLICAL PEAKS AND IN 1962



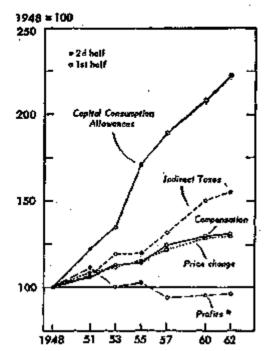
Note: Profits are before tax and include inventory valuation adjustment

U.S. Department of Commerce, Office of Depleys Economics. 42-13

^{3.} In the cost of intermediate purchases, the full purchase price for goods and services obtained from noncerporate business (this would apply to most farm products) is counted. In purchases by one corporation from another, the purchase price less charges against gross product is counted.

PROPIES PER UNIT OF REAL CORPORATE OUTPUT

Remain Stable While Other Charges Against Comparate Gross Product Rise



*Profits are before tax and include ignerators valuation adjustment.

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This has expanded the property tax base, and hence, property tax payments, appreciably.

In addition to the factors whose expansion in line with output was to have been expected, property tax rates have risen and State and local governments have been resorting to sales taxes to an increasing degree to finance their activities. As a result, total indirect taxes have been pushed up relatively more than corporate sales. This, of course, has been one of the influences affecting the relative corporate cost structure.

Capital consumption allowances expand

Capital consumption allowances have expanded stendily at a rate significantly faster than the growth of gross product. Over the entire span since 1948, the share has almost doubled. If the output currently set aside for capital replacement has increased only in proportion to the growth of the corporate economy, capital consumption allowances currently would amount to about \$16% billion. Instead, they totaled \$29 billion, at annual rates in early 1962.4 This \$12% billion increase in capital consumption allowances relative to other costs is the major element in the postwar changes in the corporate cost structure.

The postwar rise in the share of capital output claimed by depreciation may be explained by reference to three separate factors. First, for the period as a whole, the growth of capital stocks exceeded the growth in the physical volume of output. The immediate postwar years were characterized by a deficiency of capital, reflecting the low operating rates of the depression; the concentration of special-purpose defense facilities during the war boom; and wartime restrictions on "nonessential" expenditures. In contrast, capital stocks in recent years have been adequate for the levels of production obtaining and more than adequate in some areas.

Secondly, much of the plant and equipment in operation in the immediate postwar period had been constructed or purchased at the relatively low prices prevailing in the inter-war period. Consequently, depreciation charges were low relative to the price of current output and the replacement costs of capital goods which had risen sharply.

The abnormally low level of capital consumption in the early postwar years is strikingly illustrated by comparison with the prewar period. Capital consumption allowances accounted for about 8% percent of corporate gross product in 1929 and 1939, but amounted to only 5% percent in 1948 and did not again reach their prewar level until about 1957.

Finally, the Korean War defense facilities program permitting accelerated amortization on certain facilities tended to increase reported depreciation allowances during the middle and late fifties. By 1962, the effect of this program on reported depreciation had become negative. The Internal Revenue Act of 1954, on the other hand, authorized a speed-up in amortization schedules which has had a continuing effect. It is estimated that the net effect of these two programs by 1961 had added about \$4 billion to

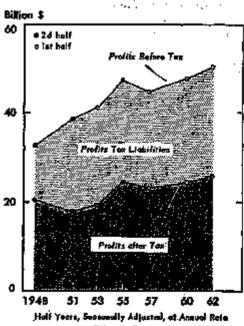
corporate depreciation. The recentlyintroduced procedures will likely add a similar amount to depreciation allowances in a much shorter period.

The three curves in the chart on page 25 bring into focus the role of capital consumption allowances in the corporate profits experience. The lowest of the three lines depicts changes in corporate earnings as a percent of corporate gross product. This is the profits measure that has been reviewed in this article.

The center line of the three depicts the profits share plus the extra depreciation permitted by the Korean-accelerated schedule of tax amortization and by the more liberal methods of calculating depreciation provided by the Revenue Act of 1954. Even with the effects of this speed-up in the write off of capital equipment eliminated, profits show a comparatively steep decline relative to total corporate output. Whereas the profit share as measured in accordance with IRS rules fell one-fourth from 1948 to 1962, it declined almost onefifth even with the "extra" depreciation added back.

The top line in the chart shows corporate profits plus total capital consumption allowances. The decline in this aggregate over the entire postwar

Corporate Yax Liabilities Have Doubled Since 1948 While Profits After Tax Have Risen One-Fourth



Effective Tex Rete

53% 49% 48% M.1. Department of Community, Office of Business Scorenies.

^{4.} It will hear repeating that in the comparisons being used the increased depreciation assumed to result from the current liberalized procedures has not been (princied.

period amounts to 7 percent—about 10 percent if the abnormally high 1951 period is used as a base.

Summary of corporate cost changes

The tabulation below summarizes postwar changes in the corporate cost structure and, for perspective, shows comparable distributions of charges against corporate gross product in 1929 and 1939.

Percent Distribution of Charges Against Corporate Gross Product

	_			_
	1929	1939	1948	1982
Corporate gross product	100.0	100. 0	100.0	100.0
Capital consumption allow- arters process takes. Employee compensation. Not interest. Profits before tax and includ-	9.3 6.2 63.3 8.0	8.5 11.6 64.2 3.1	8.9 84.0 84.0	9.5 30.5 61.0 .8
ing IVA.	12.0	12.5	21.3	345.7
Addendum: Profits and in-	22.D	15. 0	21.5	16.0

^{*}Data for first 6 months are songal rates.

Comparison of the 1948 and 1962 distributions show that over the postwar years, capital consumption allowances and indirect business taxes have risen faster than corporate output; employee compensation has increased at the same rate as output; and corporate profits, as a residual income share, have borne the brunt of these changes in the corporate cost structure.

If a longer view is taken, much the same picture obtains but the changes are more moderate and some further shifts among income shares are evident. Comparison of 1929 and 1962 indicates only a moderate rise in capital consumption relative to output—a rise that can be accounted for fully by the "extra" depreciation authorized by the postwar changes in laws and regulations regarding depreciation.

The long-term comparison also buttresses the view noted earlier that corporate depreciation in 1948 was "abnormally" low. The other major difference between the short- and long-run views is that between 1939 and 1948 there was a shift from interest to profits in the distribution of returns to capital as corporations used relatively less borrowed capital.

Comparison of the position of corporate profits relative to corporate output in the several years shown in the tabulation indicates that a portion of the decline in the profits share since World War II represents a basic reduction in capital's share, while a portion seems to represent a return from an unusually high profits position in 1948 and 1951.

Finally, in evaluating the relative position of corporate profits in the income distribution, an additional fact should be considered. The use in this review of selected periods of high economic activity was designed to minimize the effect on profits of changes in the business cycle. Nonetheless, it should be noted again that since the midfifties the Nation's economy has been operating well below capacity even at the top of the expansive phase of the cycle. This excess capacity, along with intensified competition, has doubtedly been a prime factor in the profit lag. That is, unused capacity in an industry contributes in full measure to overhead costs but adds nothing to revenues, thereby depressing net earnings. Such measures as are available indicate strongly that over the recent period there has been considerable slack in the rate at which industrial capacity has been utilized. An increase in this rate would most certainly increase corporate earnings through the joint action of a rise in

profit margins and a greater volume of revenue.

Disposition of Corporate Cash Flow

It is of interest to note the disposition that corporate management collectively has made of the cash flow which is defined as book profits after taxes plus depreciation charges. Also, cash flow includes profits after taxes received by U.S. corporations from their foreign branches and investments.

After-tax profits exclusive of inventory gains and losses, rose from \$20% billion in 1948 to \$26 billion in 1962. This increase of a little more than one-fourth compares with a doubling of corporate tax liabilities over this period—from \$12% billion to \$24% billion.

The sharp rise in tax liabilities is largely the product of tax-law changes in the late 1940's and early 1950's when the effective tax rate rose from about 38 percent to 52 percent. From 1948 to 1951, pre-tax profits rose a little less than \$6 billion, while tax liabilities were up more than \$8 billion, leaving the after-tax figure down \$2½ billion.

Compared with 1951, however, tax liabilities have risen \$4 billion and after-tax profits have moved up nearly \$8 billion, largely owing to the elimination of the Korean War excess profits tax in 1954. The course of tax liabilities and of profits after tax are shown in the chart on page 26.

Profits after tax plus depreciation charges (corporate cash flow) rose from \$27 billion in 1948, to \$52½ billion currently. Of this total, between one-third and one-fourth has been disbursed to stockholders in the form of dividends while the remainder has constituted a fund for replacement and expansion of capital, and other corporate needs.

Dividend disbursements have risen 111 percent from 1948 to 1962, a rise that matches the growth of total corporate output and compensation of employees and exceeds the relative growth of earnings. Maintenance of dividend payments at a rate commensurate with overall growth, has resulted in a smaller growth in the residual left for replacement and expansion.

Although depreciation in the first half of 1962 is four times the 1948 volume, undistributed profits have actually declined—from \$13 billion in 1948, to \$10 billion so far in 1962. Together, undistributed profits and depreciation have risen 90 percent. There has been little additional resort to external financing, and capital formation has declined as a proportion of gross national product. Nonetheless, as indicated above, the Nation's capital stocks have increased more than has the physical volume of output over the period.

Table 5.—Disposition of Corporate Internal Funds, Selected Periods (Billions of dollars)

	<u> </u>						
	Second half 1948	Second half 1961	First half 1953	Second helf 1955	First half 1947	First half 1960	First half 1962
Prefits before tax, including inventory valuation adjustment I	≵ L 6	41.2	49.1	6.1	42, 6	47,4	39.1
Inventory valuation adjustingut Profits before tax Tax liability Profits siter tax	32.9	2.5 38:7 20.6 18.1	-1.0 41.2 21.7 19.4	-2.5 47.6 23.3 24.4	-2.0 44.8 21.7 28.1	47.6 23.6 24.2	20.6 20.6 25.6
Cook flow to the contract of t	27, 1	\$7,6	44,3	48,9	42,1	47, 5	52, 3
Dividends. Undistributed profits plus depredation. Undistributed profits. Depredation.	19.5	10.4 8.9 9.5	9.8 21.8 10.1 11.7	11.5 29.3 12.9 10.4	12.7 29.4 10.4 19.0	14.3 33.2 0.0 23.3	16. 5 38. 4 10. 2

^{1.} Includes profits originating in rest of the world. 9.After-tax profits plus depreciation.

(Continued from p. 5)

employees costing about \$% billion of for the three quarters of the current fiscal

year it is in effect.

Federal expenditures other than for goods and services are slated to rise by almost \$3 billion, with transfer payments to individuals up \$1½ billion, largely unchanged from the January estimate. Higher unemployment compensation payments, in line with the lower than earlier estimated rise in economic activity, were offset by the reductions from estimated budget expenditures made by the non-passage of proposed legislation, such as the youth employment opportunities program. Federal aid to State and local governments would rise because of higher highway construction and public assistance outlays. The effects of the accelerated public works program will probably be only small in this category of Federal spending.

Interest charges are projected about \$½ billion higher than in the past fiscal year, partly because of the increase in the national debt and partly because of a higher average rate of interest to be paid. Finally, the "subsidies less current surplus of government enter-prises" category will remain at about the current level of \$4% billion, annual rate, rather than decline by \$% billion as estimated in January. The postal rate increases are to become effective in January 1963 rather than in July 1962 as anticipated in the January. budget and the postal pay raise was larger than proposed so that the postal deficit is larger than first estimated. In addition, the non-passage of certain parts of the President's farm program proposals is expected to increase the deficit of the Commodity Credit Corporation.

(Continued from p. 7)

the first year of the current expansion, continued the rise begin in the second quarter. By virture of the gains of the last two quarters, business fixed investment, after allowance for price increases is currently well above 1960's peak quarter and about back to the postwar peak reached early in 1957. As a percentage of GNP, however, outlays for plant and equipment are still somewhat lower than in 1956-57.

Residential construction

There was a further sharp rise in residential construction activity for

the quarter, bringing the cumulative rise since the 1961 first quarter low to over 25 percent. After allowance for price changes, the third quarter rate about matched that of the second quarter of 1959, the previous high in residential construction activity. Housing starts during the quarter were off somewhat from the spring peak, but the behavior of this series has been highly erratic in recent quarters.

Lower inventory accumulation

Businessmen sharply reduced their rate of inventory accumulation for the second successive quarter, following three quarters of cyclical recovery in 1961, and a moderate degree of hedging against a steel strike in the first quarter of this year. Additions to stocks during the quarter in terms of annual rates amounted to only \$1 billion as against \$4 billion in the second and nearly \$7 billion in the opening quarter of the year.

In contrast to the second quarter decline, which reflected principally a reaction from the first quarter buildup in the durable goods lines, third quarter additions to stocks were lower in most areas of production and distribution, and there was some liquidation of stocks among distributors of nondurable goods. Automobile dealers were a notable exception, accounting for most of the third quarter gain, as stocks were built up to meet the requirement for 1963 model cars.

(Continued from p. 18)

Appendix

This appendix describes the procedures used in deriving the full set of calculations of capital stocks and related items upon which this summary report is based. This project has been planned in the Office of Business Economics as part of an inter-departmental study of economic growth in which Offic reoperates with the Bureau of Labor Statistics, the Council of Economic Advisors, and other Federal agencies. The programing and machine work were done on contract by CERs, Incorporated, formerly the Corporation for Economic and Industrial Research.

The calculations are based on a manuscry, short-out methodology; they will be followed by a second version based on more elaborate behadques. In perticular, separate distributions of fives will be used for a list of more than 40 items of equipment and structure types; in the present study only eight average service lives are used. (See below.) No allowance is made for dispersion of retirements ground the average service lives.

In view of the nature of this pilot project, some of its results will probably have to be modified when the results of the more detailed study become available.

The series cover fixed capital essets—structures and equipment—located in the Continental United States and owned by U.S. private business (including private ownership of readeness), nonprofit institutions, and foreigners.

Saries have been prepared for residential structures, nunresidential structures, and for equipment; the first of these items is carried separately and not included in any of the typo of easet or industry summaries. (The residential estimates have not been used in the preceding article.)

Brankdowns are provided by farms, manufacturing, and all nonferm nonmanufacturing industries combined, in addition to subtotals and totals for these locastrial groups.

Calculations have been made for gross capital stocks, discards, depreciation, not capital formation, not stocks, ratios of not to gross stocks, and the age composition at gross and not stocks. All these are confinedous time series for the period 1928 or 1925 to 1925, except for the age composition data which are given only for selected years.

The figures were prepared by the perpetual inventory mathod—involving the application of expiration dates to time series on goes investment—and accordingly prosssitated assumptions as to economic lifetime and proper depreciation formula.

There is no constants at to what are the communicalisationes of capital assets. One set of estimates was prepared largely on the basis of litetimes published in Bulletin F (1942 edition) of the Internal Rovenne Service, and, in the case of the farm components on Department of Agriculture data. In addition, estimates based on Illetimas 10 percent, 20 percent, and 40 percent longer and aborter were calculated. These seven litetimes were used in all the calculations except in the agricultures were need in all the calculations except in the agriculturion tabulations in which the 10 percent variable were outlitted.

A similar approach was taken to the depreciation colculations. Since we do not know what is the economically ourrect formule for spreading depreciation over the lifetime of a capital asset, five different formulas were need: Straightline; 14, double, and triple declining behaves method; and the sum of the year-digits method. All series affected by the varient calculations of depreciation were computed for each of the depreciation formulas,

Finally, there is no single economically correct method for valcing capital stocks and related magnitudes. Different valuations are relevant for different purposes. In the light of this, the estimates have been presented on alternative bases of valuation. The first set is in terms of historical costs.

The second set is in terms of constant (1964) dollars. In view of the well-known uncertainties attaching to price index numbers, two versions of the constant-dollar figures are calculated to addition to the basic version (i) which uses the implicit price deflators for producers' durable equipment and construction prepared for the national income and product accounts. In view of their possible deficiency—they measure, in general, prices of inputs rather than of outputs—the construction definiors were replaced by (2) the implicit deflator for nonfarm business ONP as a measure of the price of structures. In view of the known inshilky of price indenses to reflect quality improvement comprehensively, a further edjustment was applied to variant (2) for structures and to variant (i) for equipment. This verient (3) assumes a one percent per year allowance for nameasured quality improvement. Needless to say, this latter adjustment is speculative; it has little conceptual or statistical foundation and it introduced only because it has been suggested by responsible students in the field.

The third set of valuations is in terms of current deliars. This set expresses the physical valumes of a particular time in terms of the prices that actually prevailed at that time, Insymech as this involves multiplication of siries expressed in 1904 prices by the ratio of given period prices to 1904 prices, it can be seen that a repercise current-deliar version corresponds to each of the three comptant-deliar opequations.

Current-dollar calculations for net-gross ratios and aga composition calculations have been emitted. It is believed that they are of losses interest than the historical and constant-dollar cabulations, and that they would not differ materially from the latter.

The reaching calculations were based on the following separate time series of gross capital formation:

Residences, form
Besidences, nonferm

Nonresidential structures, form Nonresidential structures, manufacturing

Nonresidential structures, all other private industries

Equipment, first

Equipment, manufacturing

Equipment, all other private industries

Both of these series was provided in historical deliars as well as in constant-deliars—including all applicable varients of the letter valuation, as discussed above. Table 7 presents the average lifetimes based mainly on Bulletin F (1942 edition) information and the six additional lifetimes that were assumed.

This excludes the cost of the pay raise for Post Office employees, which is included in the "subsidies less current surplus of government enterprises" entegory discussed below.